

## PROJECT DESCRIPTION

On a realty in the „Millenium Park“ in Lustenau the construction of an 11-storey hotel with a basement (20,5 m x 20,5 m) and a surrounding underground car park (ca. 33,0 m x 48,0 m) is planned.

The foundation and construction pit system are produced in deep, unsustainable soils and high groundwater levels. For the planning of the necessary deep foundation measures with 34 m long in-situ concrete displacement piles, soil explorations as well as a pile test loading were realized in advance.

A numerical evaluation of the pile test loading was performed to determine realistic pile values. Afterwards the numerical modeling of the entire foundation was carried out by finite elements method.

With regard to the creation of a stable enclosure of the excavation pit, several variants were examined.



## 3G WORK AREAS

- Preparation of a concept, tender design and supervision of site investigation
- Geotechnical report
- Numerical modelling of pile test loading and foundation measures
- Examination of several variants of a stable enclosure of the excavation pit
- Geotechnical consultancy

## TYP OF PROJECT:

Geotechnical engineering

## LOCATION:

Lustenau, Vorarlberg, Austria

## PROCEEDING PERIODS:

2018 - 2019

## CLIENT:

PRISMA Zentrum für Standort- und Regionalentwicklung GmbH

Hintere Achmühlerstraße 1  
6850 Dornbirn

## SUMMARY

### PROJECT:

Hotel at Millennium Park Lustenau

